City of Ashland

Parking Study

2018

Planning and Development Department

Executive Summary

The Downtown Parking Analysis for the City of Ashland is a comprehensive study of parking resources in the downtown business district. The goals of the study are multifold: (1) to create a comprehensive database of all of the public parking in the core downtown, (2) to create parking maps for this district that can be accessed by the public to aid them in finding parking, (3) to educate downtown business owners regarding available parking for their customers and employees, and (4) to inform future development decisions, ensuring that parking needs can be met. The study does not take into account private parking that exists in the study area; the data collected is strictly limited to public parking that is owned by the City of Ashland.

The report contains the following findings:

- Accurate counts of available public parking, including permitted and non-permitted spaces
- Analysis of how current parking resources are being used
- Recommendations for how current resources could be better utilized
- Recommendations for infrastructure changes
- Recommendations for future parking

The study was a three-step process. The first step was to survey and catalog all of the available public parking in the study area. Second, this information was used to create a map using GIS. The third phase of analysis required collecting usage data for every parking spot in the study area. This data was then used for comparison to the available parking in the study area, and these tabulations provided results such as surplus/deficit parking and parking occupancy.

Parking Study Area

The study area encompasses the core of the downtown business district stretching north to south from Lake Shore Drive West to 3rd Street West, and east to west from Ellis Avenue to 9th Avenue West. This area contains 751 public parking spaces in a 30 block area.

Parking Supply

There are a total of 751 public parking spaces in the study area. Of these spaces, 310, 41%, are in surface lot[1], the other 441 spaces, 59%, are on-street parking spots.

Definitions

- **Parking Supply -** the number of available parking spaces in the study area
- **Occupancy –** the percentage of occupied spaces in a given area
- **Accumulation –** the number of cars present in a given area for a given time. The accumulation for each hour can be added to generate the number of cars that used the lot for the entire day.
- **Surplus –** the number of parking spaces in a given area that are unoccupied
- **Blocks -** a number was assigned to each block, these numbers are based on the address numbers for the block and which side of Main Street the block is on. For example, a block on the south side of Main Street is identified as 200 W South. The W referring to it being on West Main Street and the South identifying the side of Main Street where the address is located.
- **Turnover** – the number of cars present in one parking space over the course of the day. This data is used to determine if people are overstaying the time limits on parking spaces.

Findings

Occupancy Counts

- Occupancy for Main Street peaks at 12pm with a total occupancy of 49%.
- Main Street had the highest usage of on-street parking with a total occupancy averaging 70% at 12pm.
- The avenues had the second highest usage of on-street parking with a peak average occupancy of 45% at both 10am and 12 pm.
- 3rd Street West's on-street parking was underutilized on average with peak occupancy of 23% at 2pm.

[1] The total number of public parking spaces in city parking lots does not include the 18 spaces in City Lot A because it is currently a permit only parking lot.

- Public parking lots peaked with an average occupancy of 48% at 10am.
- Occupancy for the total study area peaked at 45% at noon.

Parking Surplus

The study highlights that there is an adequate amount of parking to meet current parking needs in the downtown district. Throughout the course of three complete parking surveys, no blocks showed occupancy rates exceeding 80%, which indicates that even the busiest blocks still have 20% surplus parking. In addition to these blocks having 20% of their parking as surplus, these busy blocks are within 400ft of consistently available parking.

Recommendations

- Educate the public about where public parking is available and the rules that apply to public parking.
- Encourage employees and visitors who wish to spend more than two hours in the downtown district to park on 3rd Street or in public lots which offer all day parking.
- Increase enforcement of 2hr parking and issue warnings to visitors that overstay the two hour limit.
- Explore adding a public parking lot behind the Vaughn Public Library to meet future parking needs.

Conclusions

The data gathered over the course of this study highlights that presently, Ashland does not appear to have a parking shortage, but rather a need to change how parking is perceived. The perception that there is a parking shortage can be corrected by having publicly available parking maps informing visitors of the full breadth of available parking, and signage that is easier to read from a passing vehicle. Through the use of parking maps, better signage, and increased enforcement, the current parking resources can be better utilized to provide a convenient and efficient parking system.

Introduction

The following study was undertaken to create a comprehensive understanding of the parking resources in the downtown district of Ashland, Wisconsin. Parking concerns have been at the forefront of many development discussions in recent years, with both business owners and downtown patrons expressing concern over a lack of adequate parking.

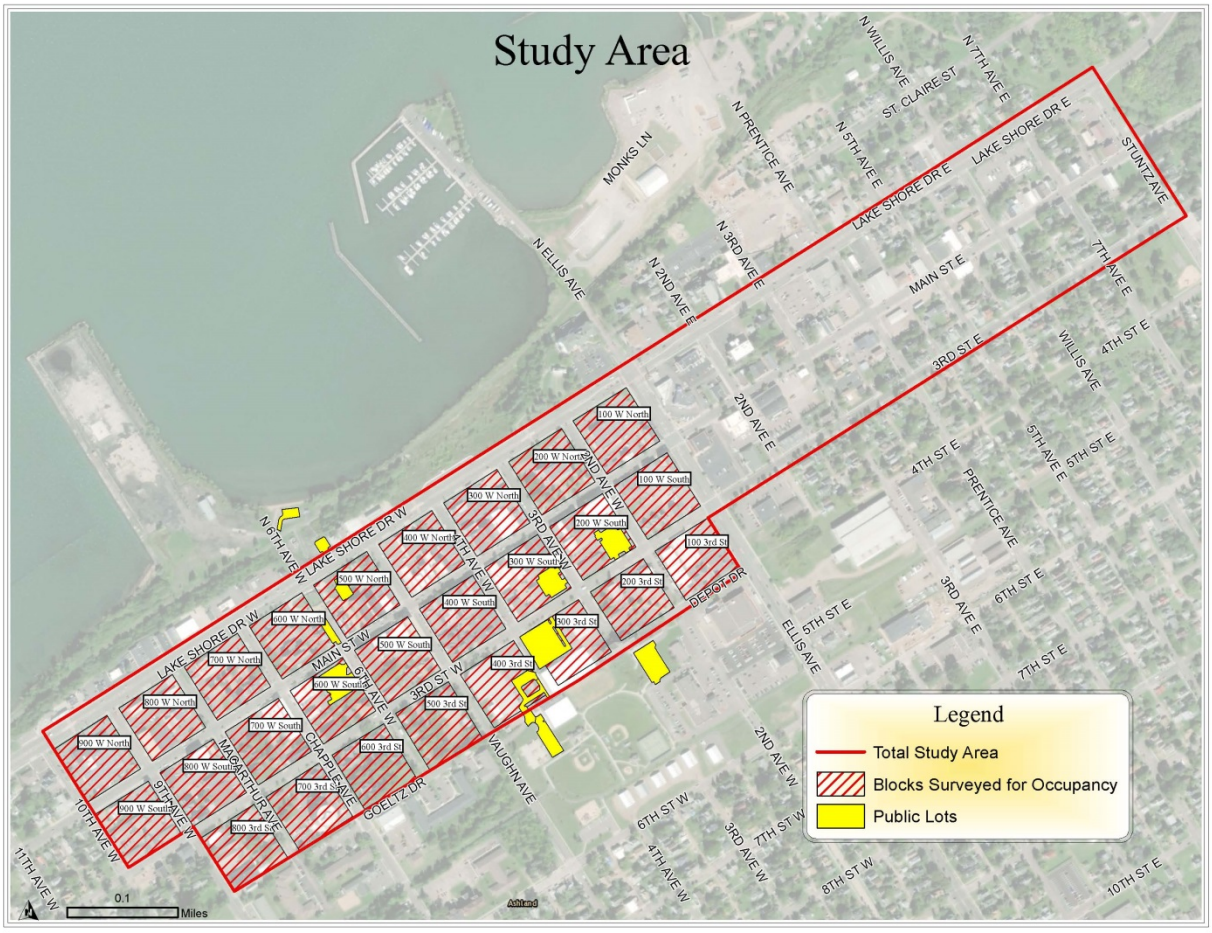
Although these discussions are an important part of the planning process, it can be challenging to have a productive exchange if insufficient data has been gathered about the current parking supply and demand. In addition to enlightening the conversation, this study can help to inform future development decisions by identifying underutilized parking spaces that can be used for future business development in the downtown.

By creating accurate maps and database of all public parking, surplus parking spaces can be allocated for new development that is interested in building or relocating to the downtown. Additionally, it will allow current businesses to effectively direct both their customers and employees to easily accessible open parking. By identifying parking usage and available resources, this study aims to allow current parking facilities to be used in the most efficient and convenient manner, thereby encouraging growth in the shopping base of Main Street which supports current and future development in the downtown.

Study Area

The study area encompasses a 30 block area, north to south from Lake Shore Drive West to 3rd Street West and west to east from 9th Avenue West to Ellis Avenue. In addition to this 30 block area, public parking lots that fall outside of the designated study area that are still within a reasonable walking distance of the downtown district are included in the study. The parking maps and database that were created included the public parking extending into Main Street East, running from 9th Avenue West to Stuntz Avenue on the east end. The area of study can be seen in Map 1, this includes both the area where occupancy counts were performed, and the further area that is included in the parking maps and database that were created.

Map 1.


Study Area
Legend
Total Study Area
Blocks Surveyed for Occupancy
Public Lots
LAKE SHORE DR W
LAKE SHORE DR E
MAIN ST E
3RD ST E
4TH ST E
MAIN ST W
3RD ST W
6TH ST W
7TH ST W
8TH ST W
N ELLIS AVE
ELLIS AVE
PRENTICE AVE
N PRENTICE AVE
WILLIS AVE
N WILLIS AVE
STUNTZ AVE
MONKS LN
ST. CLAIRE ST
N 7TH AVE E
N 5TH AVE E
N 3RD AVE E
N 2ND AVE E
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7TH AVE E
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3RD AVE W
4TH AVE W
5TH AVE W
6TH AVE W
7TH AVE W
9TH AVE W
10TH AVE W
11TH AVE W
N 6TH AVE W
VAUGHN AVE
GOELTZ DR
DEPOT DR
CHAPPELL AVE
MAGARTH AVE
5TH ST E
6TH ST E
7TH ST E
10TH ST E
100 W North
200 W North
300 W North
400 W North
500 W North
600 W North
700 W North
800 W North
100 W South
200 W South
300 W South
400 W South
500 W South
600 W South
700 W South
800 W South
100 3rd St
200 3rd St
300 3rd St
400 3rd St
500 3rd St
600 3rd St
700 3rd St
800 3rd St
0.1
Miles

Methodology

Before any analysis could be performed, accurate data needed to be gathered. This parking data encompassed the total study area from 9th Avenue West to Stuntz Avenue, in addition to the section of Main Street where occupancy counts were conducted. In order to create an accurate database of all public parking spaces, the city's old parking data was cross-referenced with both on-street and surface lot parking to verify consistency with the previously recorded information. If the parking spaces present on the street did not match the data recorded in the old database, it was updated to accurately reflect the actual parking present on the street. Not only were the number of parking spaces recorded, but also all of the rules and parameters that apply to each space. Theses parameters include such things as time limits (e.g. 2hour parking), rules (e.g. no overnight parking from 2am-6am), and whether it is a permitted space or not.

All of this information was used to create an updated database that accurately reflects the current parking resources in the study area. Once the parking database was updated, all of the information was imported into ESRI ArcGIS from which parking maps were created. Mapping all of the collected parking information allows for a city worker to click on an interactive parking map and view the information pertaining to a specific parking space. The map shows which parking spaces accommodate two hour parking, 15 minute parking, or no time limit. The map also includes the rules for the public parking lots. This map can also be printed and distributed for public use. Additionally, when used by city staff in ArcGIS, a block can be clicked on and all of the parking information for that block can be viewed from time limits to restrictions.

Once the parking maps were completed the process of designing the occupancy surveys began. To start, every parking spot in the study area was assigned a number per block, if there were ten spots on the block they were assigned a number one through ten. This was done for both sides of every street. By assigning each parking space a unique number it allowed for the usage rate of individual parking spaces to be recorded. This is important for the future if the city wants to remove a parking space or use it differently; underutilized spaces are identified.

After all of the parking spaces had been assigned a number, occupancy counts were performed for each parking space. Data was collected by walking and marking whether a car was present in each parking space. Due to the size of the study area, surveys were split into four different categories: (1) Main Street, (2) the Avenues, (3) 3rd Street West, and (4) City Parking

Lots. By splitting the area into these different categories it allowed for counts to be performed in an area that was small enough to be covered by one person in one hour. Surveys were performed every hour from 9am-3pm; a full 9am-3pm circuit was completed three times for each survey area. By performing every survey three times it established a comprehensive view of downtown parking and the wealth of data that was collected helped to even out abnormal spikes in parking which prevents skewed data. The surveys were conducted by one individual and due to the size of the study area and time commitment required, one circuit of surveys was not necessarily completed in one day. Some surveys were split between multiple days. This also contributed to lessening the effects of limited time increases in parking usage.

Once all three full surveys for all areas had been completed, the data was entered into Microsoft Excel, for statistical analysis. First, accumulation, the number of cars parked in each spot for a given time was calculated for each hour; secondly, occupancy was generated for each hour which was done by calculating the percentage of occupied spaces per hour. The last statistical measure that was calculated was surplus; to do this the proportion of open spaces was calculated. This allowed the number of open parking spaces in a given area to be identified.

Surplus proved to be the most informative of the statistical measures and this allowed surplus parking per block to be mapped using GIS. These maps show the average amount of surplus parking spaces that are available per block, and the average occupancy rate per block. By using both measures on the same map it allows the user to see both how many spaces are generally available, and what percentage of the total amount is open. Both measures are important because not all of the blocks have the same number of parking spaces. If the map only depicted one or the other of the measures, it would be misleading and it could appear that less or more parking is available than what is actually available.

Once surplus parking was mapped, radiuses were superimposed over the blocks that showed the fewest surplus parking spaces. These radiuses corresponded to walking distances of 200ft and 400ft respectively. This is to show the viewer that even if a block tends to be 80% full, there may be a large surplus of available parking spaces within 400ft of their destination. The radiuses of 200ft and 400ft were chosen because the 400ft radius is the accepted industry standard for the maximum distance that people will walk from a parking space to their destination without considering shopping somewhere else. The 400ft number is based on people who are walking in a shopping or downtown district. The maximum walking distance is greater

for areas with uses that are not shopping, and differs for employees working in downtown districts, who have been shown to be willing to walk much further distances from their parked vehicle to their destination (Smith and Butcher 2008).

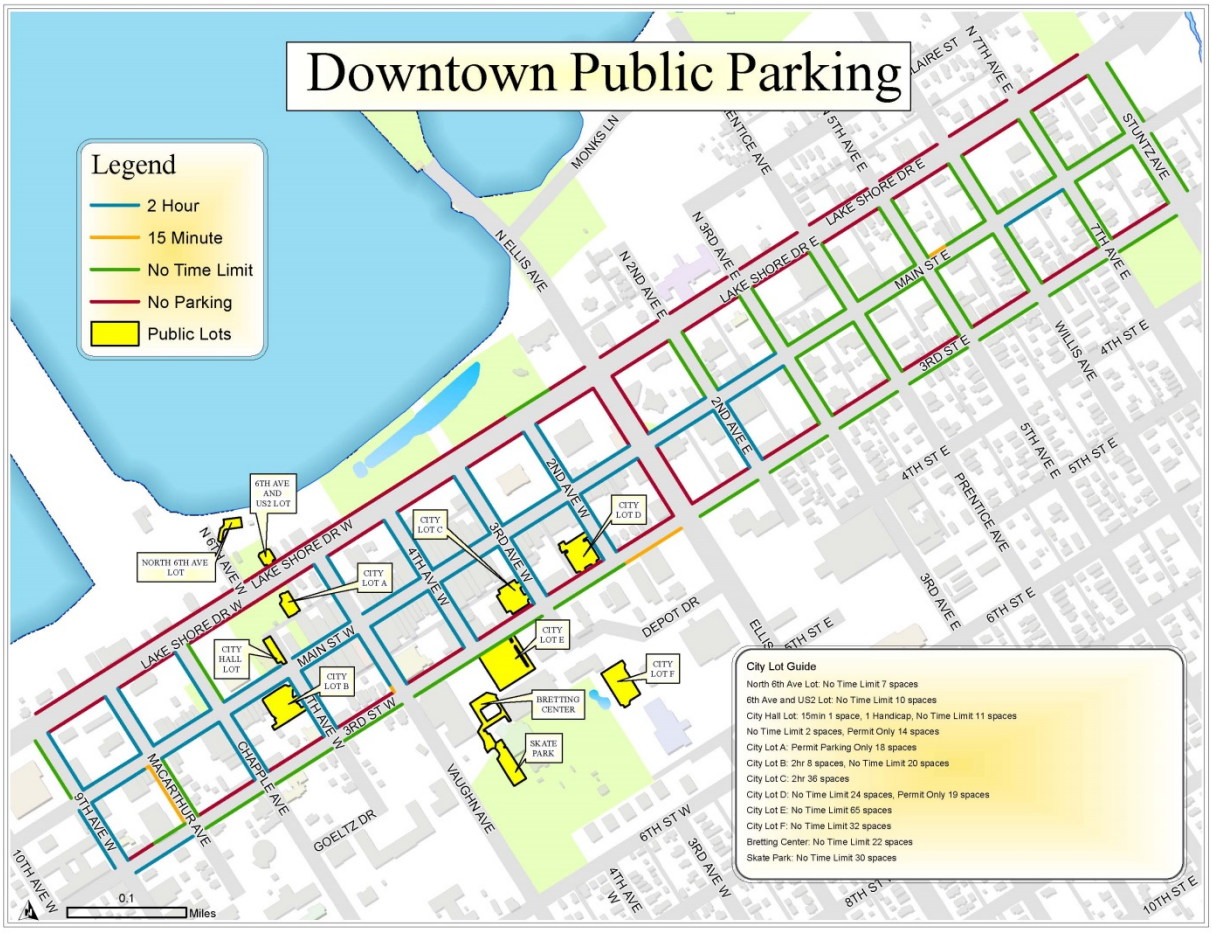
After all mapping had been completed graphs of occupancy for each survey where created, these graphs allowed for visual representations of the peaks and valleys in the parking system throughout the day.

Findings

The availability of close and convenient parking is a hot button issue throughout many towns and cities; the City of Ashland is no exception. Like other similar communities there is often discourse surrounding a parking shortage in the downtown district. The debate over parking has come to dominate much development discussion and leads to gridlock when the different parties cannot agree on whether there is sufficient parking or a severe shortage. Although these conversations can be an important part of the planning discussion, they become circular in nature due to a general lack of available data regarding Ashland's parking usage and resources. The following findings aim to provide a statistical and data driven foundation that can be used to inform future parking discussions, and ensure that the city's parking system is working as efficiently and effectively as possible.

The study evaluates the parking in the downtown district (Map 2) with a three pronged approach; first by evaluating on-street parking spaces, second by cataloging off-street parking lots, and lastly, by taking both into consideration to create a comprehensive understanding of how the parking system is functioning.

Map 2.



Comparing On-Street Parking and Off-Street Public Lots

There are slight differences in occupancy rates and parking habits between on-street parking and off-street parking lots. These differences indicate that drivers utilize the on-street and off-street parking slightly differently.

On-Street Parking

On-street parking serves the parking needs of the core downtown with the majority of the on-street parking in the study area being 2hour parking with no parking allowed overnight. The two hour time limit creates reasonable levels of parking turnover, allowing for multiple customers to use the parking spaces throughout the day instead of one vehicle monopolizing a parking stall all day. On-street parking occupancy totals peaked with a usage rate of 49% at

12pm, the next busiest hour was 1pm with a total of 43% of the 441 parking spots being filled. The standard deviation was 5% over the course of the day. This can be seen in Figure 1.

Figure 1.

Although the total occupancy for on-street parking reached its peak with 49% of parking spaces in use, these usage rates were not universal across all on-street parking in the study area. Main Street showed much higher usage rates then the study area as a whole, with Main Street occupancy peaking with 70% occupancy at noon and occupancy of 59% at 1pm; these results can be seen in Figure 2. Parking on Main Street remained between 39% and 70% full throughout the course of the day, with the lowest occupancy occurring between 9am and 10am.

Figure 2.

The avenues portion of the study area between 9th Avenue West and Ellis Avenue showed a much lower usage at their peak than the parking spaces on Main Street. The avenues parking saw its highest level with 45% of available parking occupied at 10am and 12pm; this can be seen in Figure 3. These results confirm that even when Main Street is at its peak occupancy of 70%, there is still ample parking available on the avenues. The avenues remained between 36% and 45% full over the course of the day; the lowest occupancy occurred between 9am and 10am.

Figure 3.

The lowest occupancy of the on-street parking in the study area was on 3rd Street with cars parked in only 23% of the available parking at its 2pm peak, and 18% at the second highest occupancy. Many of the blocks on 3rd Street had no vehicles parked along them for significant portions of the survey, with parking occupancy being between 15% at its lowest and 23% at its height. The lowest occupancy occurs between 9am and 10am; this can be seen in Figure 4.

Figure 4.

Usage of the on-street parking did appear to be greater in proximity of the 300 block of Main Street on days when court was in session; however, available parking was still available within a reasonable walking distance of the courthouse. Chapple Avenue between Main Street and 3rd Street showed consistently higher occupancy rates than other blocks, but the block of Chapple Avenue between Lakeshore Drive and Main Street was consistently underutilized, allowing for ample parking within a short walk of the destinations on Chapple Avenue.

Off-street Parking Lots

The off-street public lots show different usage patterns than that of their on-street parking counterparts. The public lots have less variance in occupancy rates with a standard deviation of 3%, and peak usage occurs earlier in the day than on-street parking. The peak occupancy for public lots occurred at 10am with vehicles parked in 48% of the available parking spaces. The second highest occupancy occurring at 9am, 11am, and 1pm with vehicles in 43% of the parking spaces. At their lowest usage, only 39% of parking spaces were filled with vehicles; this can be seen in Figure 5.

Figure 5.

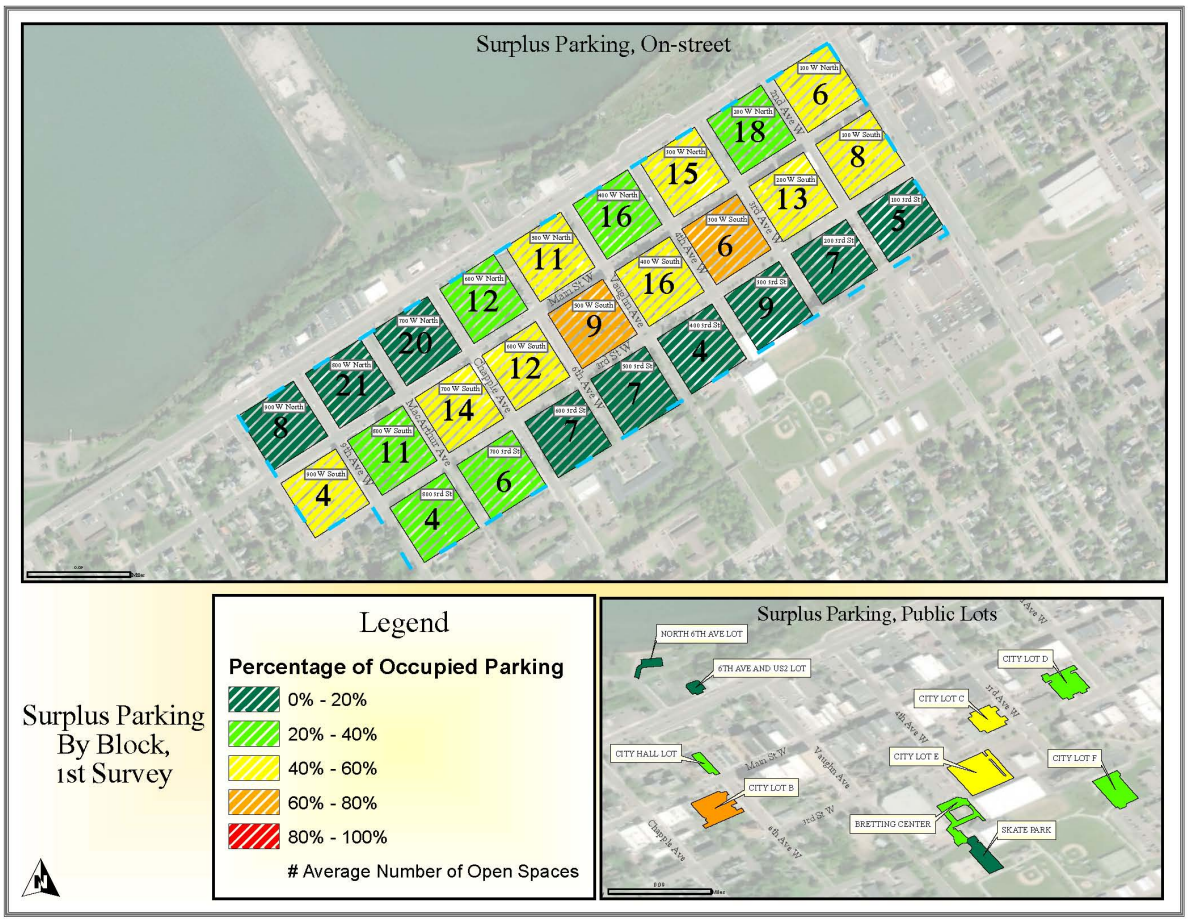
The total occupancy for the entirety of the study area reached its highest level at noon, with occupancy of 45%, followed by 44% at 1pm. Over the course of a day, parking was at its lowest at 9am with only 39% of all parking spaces being utilized; this can be seen in Figure 6.

Figure 6.

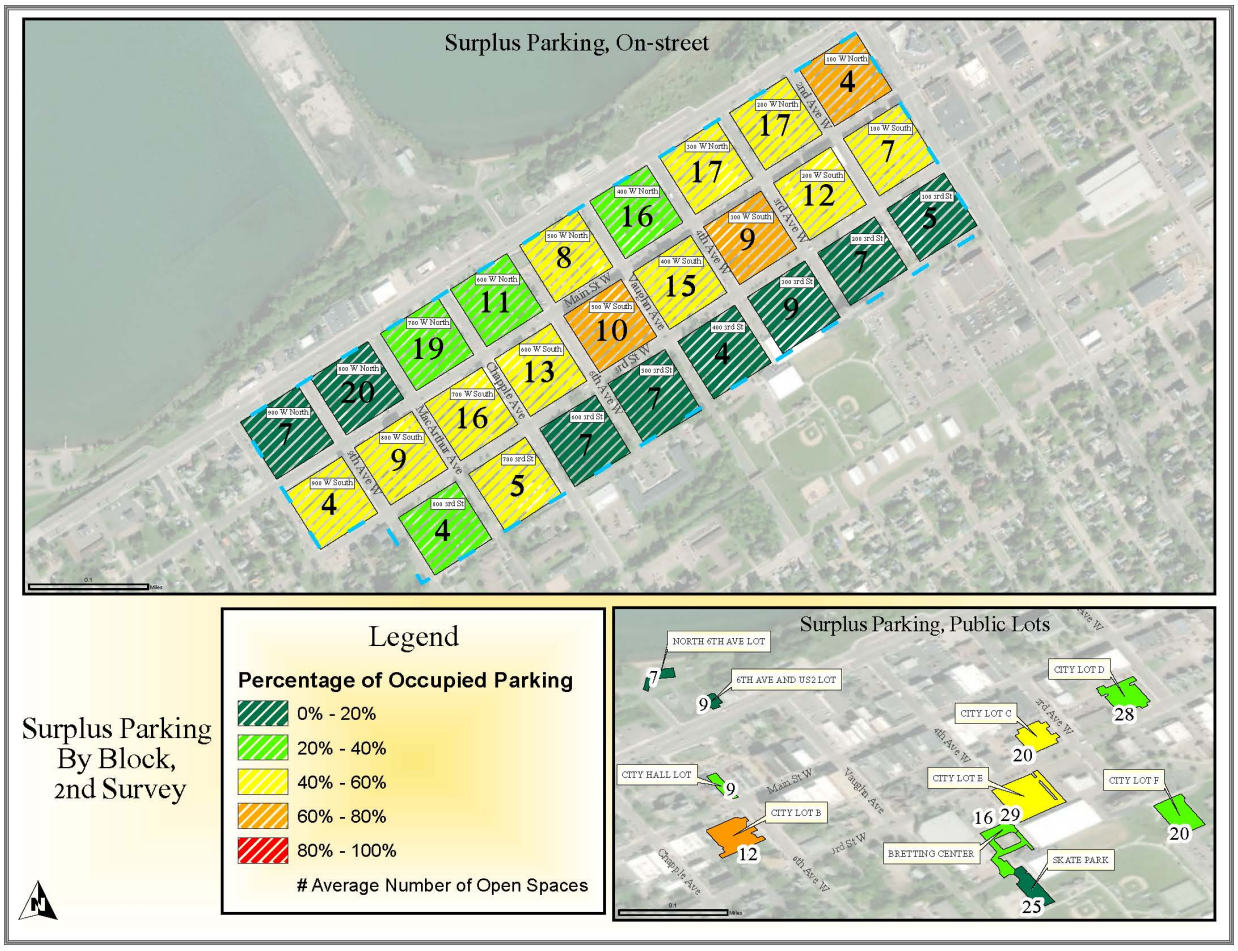
Surplus Parking

In order to better understand how parking in the downtown district is functioning, it is important to identify where surplus or deficit parking may occur. By determining where these surpluses and deficits are occurring indicates which blocks are being utilized and which blocks are not. This information then can be used to help highlight what parking is consistently available, and the proximity of available parking to the busiest blocks. Surplus for all three surveys can be seen in Map 3, Map 4, and Map 5.

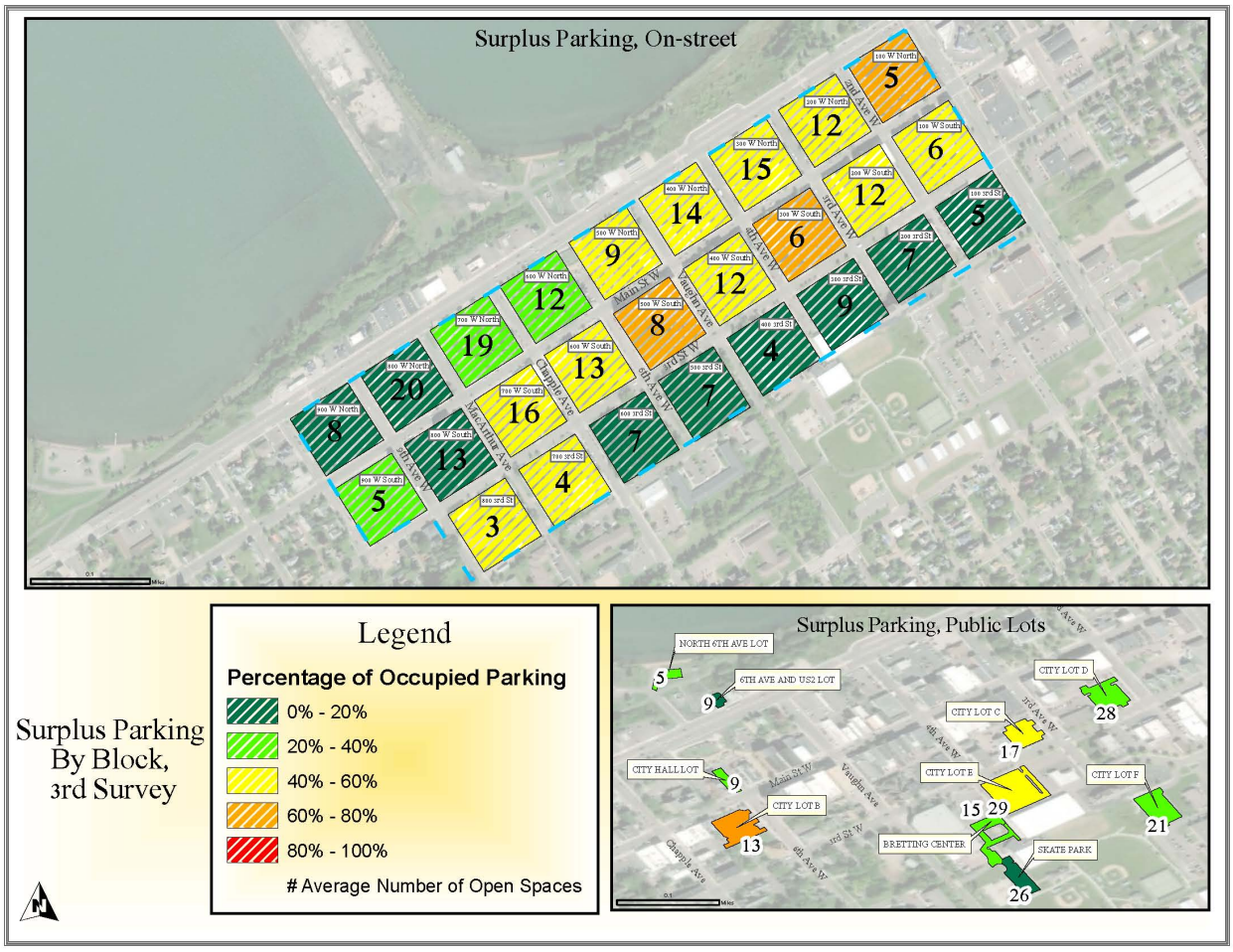
Map 3.


Surplus Parking, On-street
Surplus Parking By Block, 1st Survey
Legend
Percentage of Occupied Parking
0% - 20%
20% - 40%
40% - 60%
60% - 80%
80% - 100%
Average Number of Open Spaces
Surplus Parking, Public Lots
NORTH 6TH AVE LOT
6TH AVE AND US2 LOT
CITY LOT D
CITY LOT C
CITY HALL LOT
CITY LOT E
CITY LOT F
CITY LOT B
BRETTING CENTER
SKATE PARK

Map 4.


Surplus Parking, On-street
Surplus Parking, Public Lots
Surplus Parking By Block, 2nd Survey
Legend
Percentage of Occupied Parking
0% - 20%
20% - 40%
40% - 60%
60% - 80%
80% - 100%
Average Number of Open Spaces
NORTH 6TH AVE LOT
6TH AVE AND US2 LOT
CITY LOT D
CITY LOT C
CITY HALL LOT
CITY LOT E
CITY LOT F
CITY LOT B
BRETTING CENTER
SKATE PARK
Main St W
Vaught Ave
Chapple Ave
3rd St W
4th Ave W
3rd Ave W

Map 5.

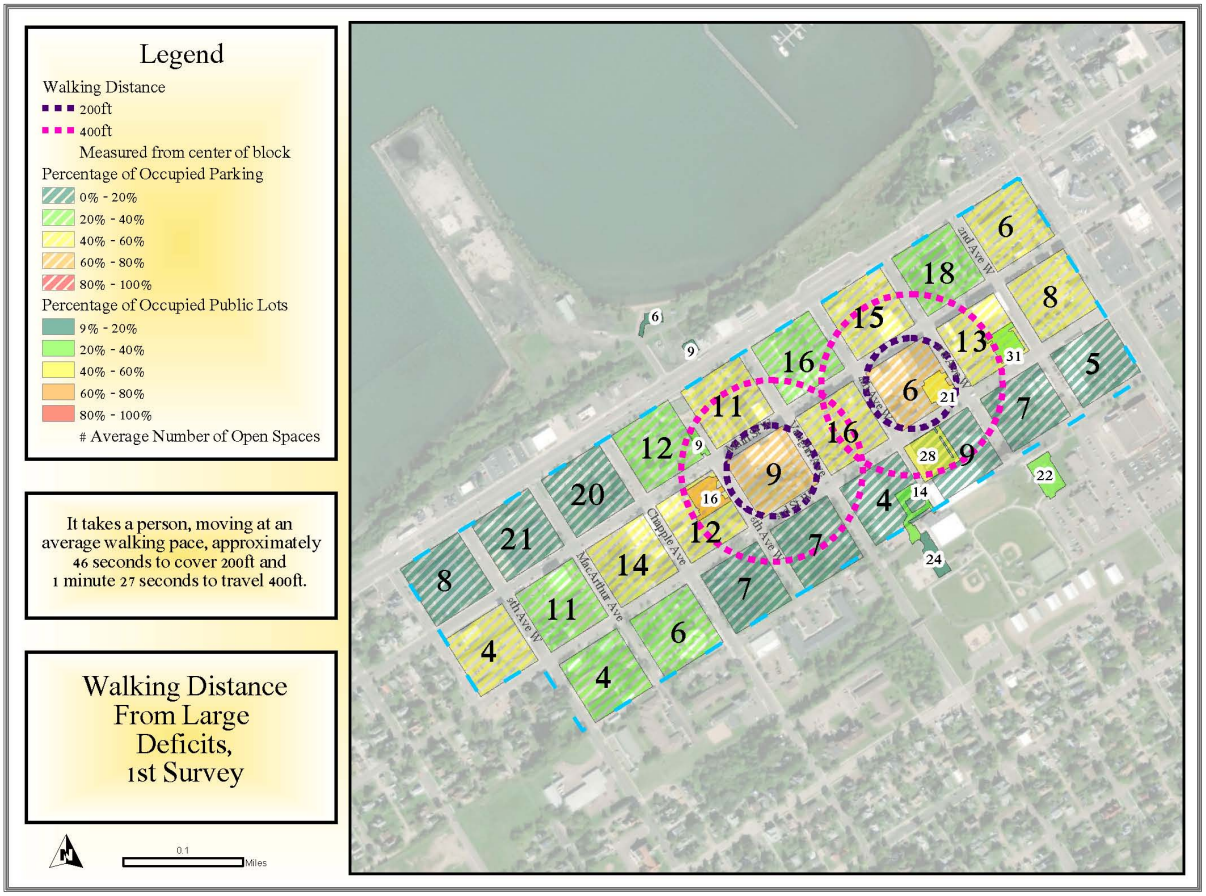


Throughout the course of the surveys, all blocks showed surplus parking with all but three blocks showing occupancy levels below 60%. The three blocks that showed the highest amount of parking spots in use, 500 West South, 300 West South, and 100 West North, all showed occupancy between 60-80%. Although these blocks showed the highest rate of use, they still have between 20% and 40% of their parking available on average. Even if parking on one of the three busiest blocks in the downtown is not available, the parking surplus maps highlight that there is adequate available parking nearby.

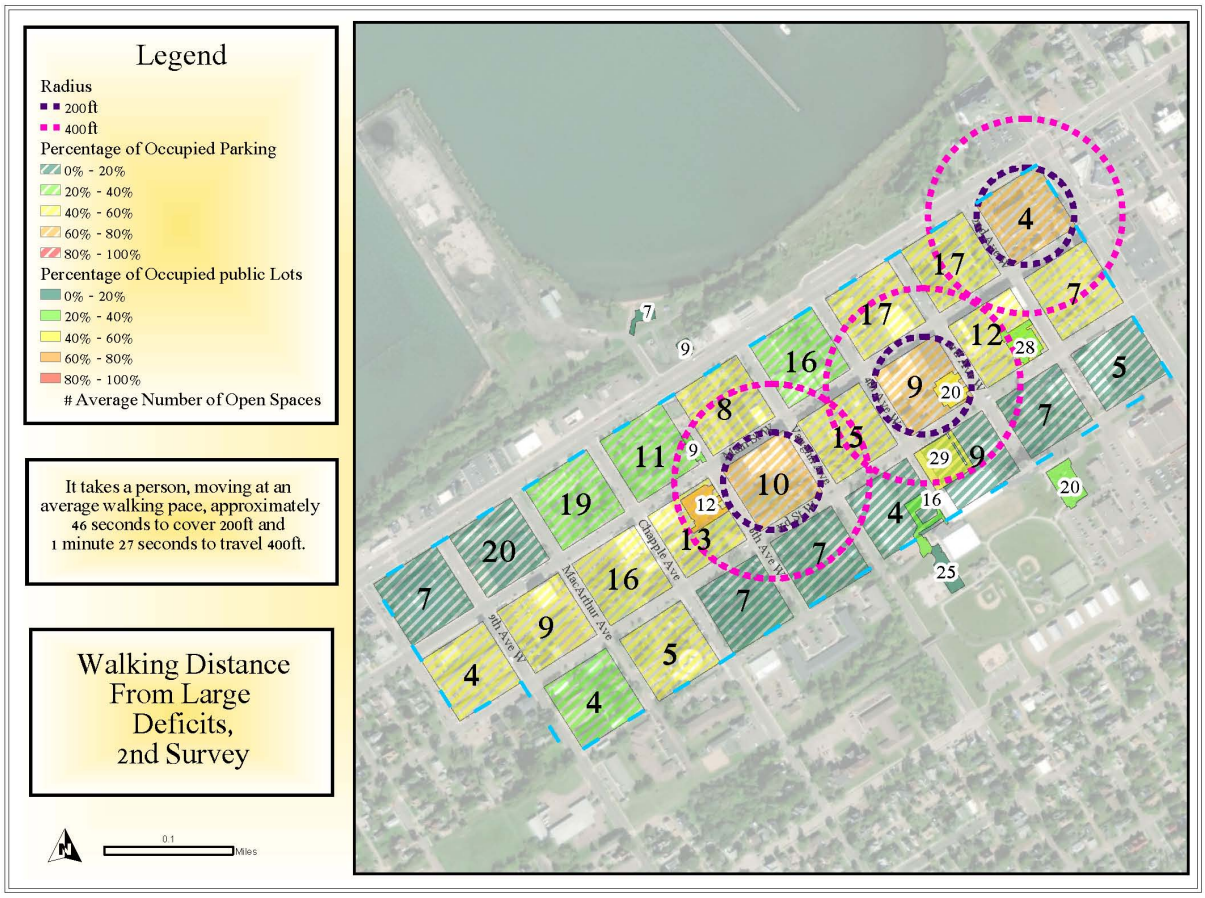
To further emphasize the proximity of available parking to the most occupied blocks, a 200ft and 400ft walking radius was superimposed over the surplus maps. These maps highlight that within a short walk of the busiest blocks, there are surplus parking spaces available. It takes the average person 46 seconds to walk 200ft and 1 minute 27 seconds to cover 400ft, making that

distance a reasonable walk from one's parked vehicle to their destination. Surplus parking within walking distance of busy blocks can be seen in Map 6, Map 7, and Map 8.

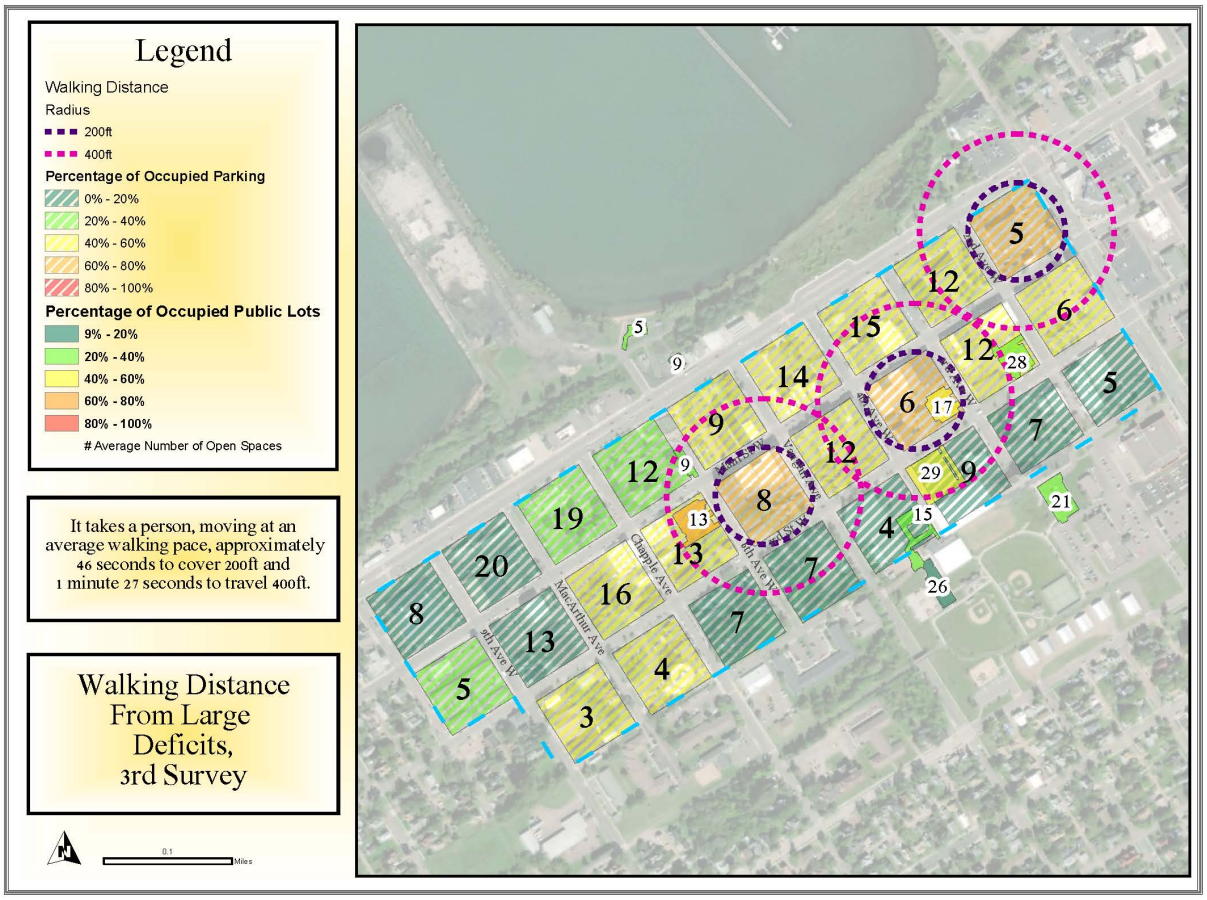
Map 6.



Map 7.


Legend
Radius
200ft
400ft
Percentage of Occupied Parking
0% - 20%
20% - 40%
40% - 60%
60% - 80%
80% - 100%
Percentage of Occupied public Lots
0% - 20%
20% - 40%
40% - 60%
60% - 80%
80% - 100%
Average Number of Open Spaces
It takes a person, moving at an average walking pace, approximately 46 seconds to cover 200ft and 1 minute 27 seconds to travel 400ft.
Walking Distance From Large Deficits, 2nd Survey
0 0.1 Miles
Gleppie Ave
MacArthur Ave
9th Ave W
9th Ave W

Map 8.



The walking distance maps illustrate that even when parking usage is at its most full, there is still ample surplus parking available within a short walking distance of any destination in the downtown district.

Wayfinding and Parking Signage

Prior to the completion of this study, there was no publicly available parking map to help people find free public parking throughout the downtown district. The lack of parking maps is then compounded by inconsistent parking signage that is not easily interpreted. There are three different types of signage commonly used throughout the downtown area: (1) 2hr parking signs that list the rules and hours of the associated parking spaces, (2) 15min parking signs, and (3) signs alerting drivers that there is no overnight parking from 2am-6am.

The first two types of signage, the 2hr parking and 15 minute parking signs, are both easy to read while passing by in a car and communicate well the rules of the parking spaces. They can be seen in Figure 7, and Figure 8.

Figure 7.

Figure 8.

The third most common parking signage found in the study area are signs alerting drivers that there is no overnight parking. These signs are placed by parking spaces that have no restrictions other than no parking between 2am and 6am; outside of those hours there is no time

limit on the amount of time a vehicle can be parked in one of these spaces. An example of these signs can be seen in Figure 9.

Figure 9.

Recommendations

Despite the frequent discussion of and persistent perception that the downtown district has a parking shortage, the data does not support this narrative. The study shows that it is not a parking shortage that is occurring but a misconception about a lack of available parking. This perceived parking shortage has caused many development discussions to revolve around a need for more parking however, before more parking is added, available preexisting parking infrastructure must be better utilized.

With peak occupancy for the entire parking study reaching its height with 49% of parking spaces full, there is consistently more than half of the parking infrastructure that is devoid of vehicles. Because of the vast numbers of open parking spaces, it stands to reason to first focus on strategies to fill available parking spaces before allocating resources to build new parking lots.

The first step in creating a more efficient and effective parking system should be replacing the no overnight parking signs. These signs, especially when passed in a traveling car, send the message that there is no parking on that block because the no parking symbol is very prominent on the sign. When driving past these signs it is very easy to miss the qualifier of

between the hours of 2am to 6am which prompts an assumption that one cannot park there. This can be seen in Figure 10.

Figure 10.

If the no overnight parking signs were replaced with parking signs that emphasize that parking is available all day, instead of when one cannot park in the space, it would help to inform visitors of the available parking options. An example of a sign emphasizing when parking is available can be seen in Figure 11.

Figure 11.

Signs such as the one shown Figure 11 highlight that parking is available during the day instead of emphasizing when one cannot park in the spot. This can help drivers to locate available parking instead of passing it by in search of a more clearly delineated parking spot. If the parking spaces without time limits were better marked it would help to take pressure off some of the 2hr parking that is currently being filled with regularity.

In addition to a signage change, the availability of parking maps should help the public to find open parking that they otherwise may not have known was available for public use. An example of spaces that could be better utilized through education is the south side of 3rd Street. This parking is currently underutilized and there is very little information informing drivers that they can park along the street. Better education of drivers, via maps and signage, would increase awareness of the availability of parking on 3rd Street and employees of downtown businesses and visitors who are going to be in the downtown district longer than two hours could park on 3rd Street. This would help to alleviate some of the parking pressures on the busiest downtown blocks.

Encouraging visitors of the downtown district to better utilize the available parking resources is only one part of creating the best parking system for Ashland. In addition to these changes, increased enforcement of parking rules is required to ensure that the 2hr parking spots in downtown are not being commandeered for longer than the allowable time. Currently, parking tickets or warnings are rarely issued; which provides little consequence for taking a premium 2hr spot in the downtown for longer than the allowable time. Through increased enforcement the city can ensure that parking rules are not being abused which would create turnover and allow for premium spaces to be used by more patrons.

In the future, with increased development in the downtown district, a need for additional public parking may arise. In order to accommodate this future demand, there is an opportunity to add a public lot on the site of the Barren Radiator building located just south of the Vaughn Public Library. This site could provide up to 20 additional off-street public parking spaces within close proximity to the library and the movie theater.

Conclusions

The data gathered over the course of this study strongly suggests that the City of Ashland does not have a parking shortage. It has a need to change how parking is perceived. The study shows that although a visitor may not be able to park directly in front of their destination, there is more than adequate parking available nearby to meet current demand.

Through proper signage and education, and minimal enforcement, Ashland can meet parking demand with current parking resources. Until the current parking infrastructure shows occupancy rates that are well above 50% in the downtown, there is no immediate need to add additional parking to the study area. As development increases, building additional parking can be considered. However, until this is the case it is more cost effective and beneficial to focus on getting vehicles in the parking spaces that currently sit vacant.